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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/038,923 | 12/31/2001 | Kang-Bok Lee | 51876P288 | 8511 |
| 8791 | 7590 | 06/12/2006 | EXAMINER | |
| BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030 | | | BLOUNT, STEVEN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2616 | |

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|----------------------------------|-------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/038,923 | LEE ET AL. |
| | Examiner Steven Blount | Art Unit 2616 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 November 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 - 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 - 14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received. *4. ~~Not~~ Translation for perfection
Required.*
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 – 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, “regardless a number of keys” (last line) is indefinite.

In claim 3, par b2 line2, “except of the first key information” is indefinite.

In claim 8, line 3, “regardless of a number of keys used” is indefinite, as is “where the consistency occurs”.

In claim 8, line 6, “consistent with” as used in this claim is indefinite.

In claim 11, last line, “regardless a number of keys” is indefinite.

In claim 13, “consistent with” in line 8 is indefinite as used in this claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 – 3 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent 7,031,314 to Craig et al.

With regard to claim 1, Craig et al teach assigning keys and pointers to each node so that related information can be accommodated in a cache line. See figure 8 and accompanying 28 lines 50+.

With regard to claim 2, note in figure 8 key pointer Po, key information D (and the rule shown); and node pointer 840 (col 24 lines 55+).

With regard to claim 3, the key pointer indicates the address of first key information, and continuous addresses are assigned to the other key information.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 7031,314 to Craig et al.

Craig et al teaches the invention as discussed above, but does not explicitly teach recording the steps on a recordable medium. However, one of ordinary skill in the art would have recognized the desirability of recording these steps in such a medium in view of the fact that doing so would have made the process repeatable, and would have further found it obvious to do so in view of this benefit.

7. Claims 4 - 5, 8 – 10, and 12 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 7031,314 to Craig et al as applied above to claims 1 – 3 and 11, and further in view of U.S. patent 5,664,184 to Ferguson et al.

With regard to claim 4, Craig teaches the invention as discussed above with respect to claims 1 – 3 and 11, but does not explicitly teach the “child node location” address, or the use of a node pointer as claimed.

Ferguson et al also teach searching a plurality of search keys using a key pointer (see col 8 lines 37+) and additionally teaches searching the child node locations in a search tree using location addresses through the use of a “decision bit pointer”. See col 9 lines 1+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Craig et al with means to search the child tree using addresses, in light of the teachings of Ferguson et al, in order to provide a means for quickly locating the desired location.

With regard to claim 8, note the above and the use of IP address in Craig et al, as well as the node/leaf dichotomy.

With regard to claim 9, Craig forms the connection (including the destination port address – see col 20 lines 25+) by comparing the key regions as discussed in col 28 lines 53+.

With regard to claim 10, the Examiner takes Official Notice that longest prefix matching is a well known search method in the art.

With regard to claim 12, see the discussion above, and note the key information comprises contiguous addresses in col 22 lines 10+ of Craig.

With regard to claim 13, see the rejection above and note that with respect to step d, the decision bit pointer is used to find where the "consistency" occurs.

With regard to claim 14, note again the use of an IP address in Craig (col 14 lines 5+, col 19 lines 55+).

8. Claims 6 – 7 are allowed.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 571-272-3071. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached on 571-272-7269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB
6/6/04


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